

CLAIMS

1. A communication apparatus comprising:

a first modulation section that modulates first transmit data and obtains a first modulated signal;

5 a second modulation section that modulates second transmit data and obtains a second modulated signal;

a first antenna that transmits said first modulated signal; and

a second antenna that transmits said second
10 modulated signal;

wherein at least one modulation section of said first modulation section and said second modulation section modulates said transmit data, changing a mode of signal point arrangement in a time direction or in a frequency
15 direction.

2. The communication apparatus according to claim 1, wherein:

said first modulation section forms said first
20 modulated signal by modulating identical data of said first transmit data a plurality of times, changing a mode of signal point arrangement; and

said second modulation section forms said second modulated signal by modulating said second transmit data
25 without changing a mode of signal point arrangement.

3. The communication apparatus according to claim 2,

wherein said first modulation section forms modulated signals with an identical modulation method and having a mutual phase difference from identical data as said first modulated signal.

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4. The communication apparatus according to claim 3, wherein said first modulation section forms QPSK modulated signals having a mutual 45° phase difference from identical data as said first modulated signal.

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5. The communication apparatus according to claim 3 or claim 4, wherein said first modulation section comprises:

15 a mapping section that maps said first transmit data at a signal point position of a predetermined modulation method; and

a phase rotation section that rotates a phase of a mapped signal point through an angle in accordance with a number of times of transmission of said identical data.

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6. The communication apparatus according to claim 1, further comprising an interleaver that interleaves said first and/or said second transmit data;

25 wherein said first and/or said second modulation section modulates data after interleaving, changing a mode of signal point arrangement in a time direction or in a frequency direction.

7. The communication apparatus according to claim 1,
further comprising a receiving section that receives
feedback information indicating a reception state of said
5 first and/or said second modulated signal from a
communicating party;

wherein said first and/or said second modulation
section changes a mode of signal point arrangement based
on said feedback information.

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8. A communication method wherein, in transmitting a
first modulated signal from a first antenna and
transmitting a second modulated signal from a second
antenna, a mode of signal point arrangement of either
15 a first modulated signal or a second modulated signal,
or both a first modulated signal and a second modulated
signal, is changed in a time direction or in a frequency
direction.